

**Chillventa Specialist Forums 2024**  
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**Welcome**

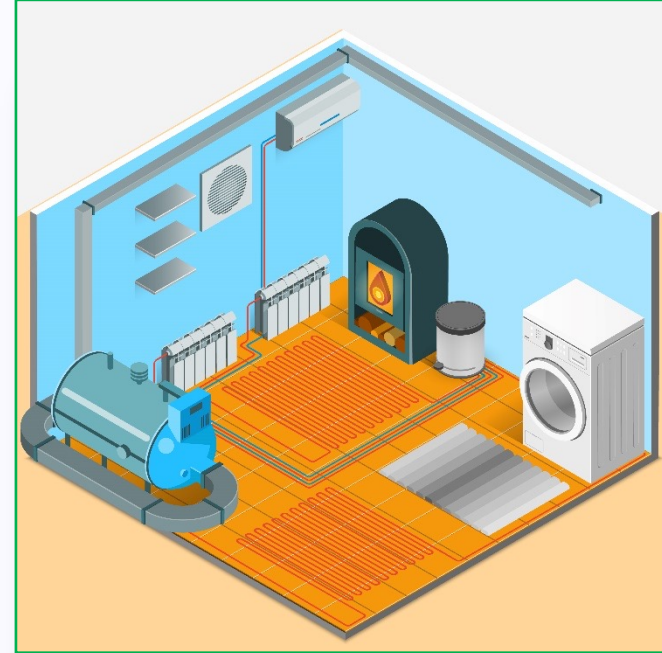


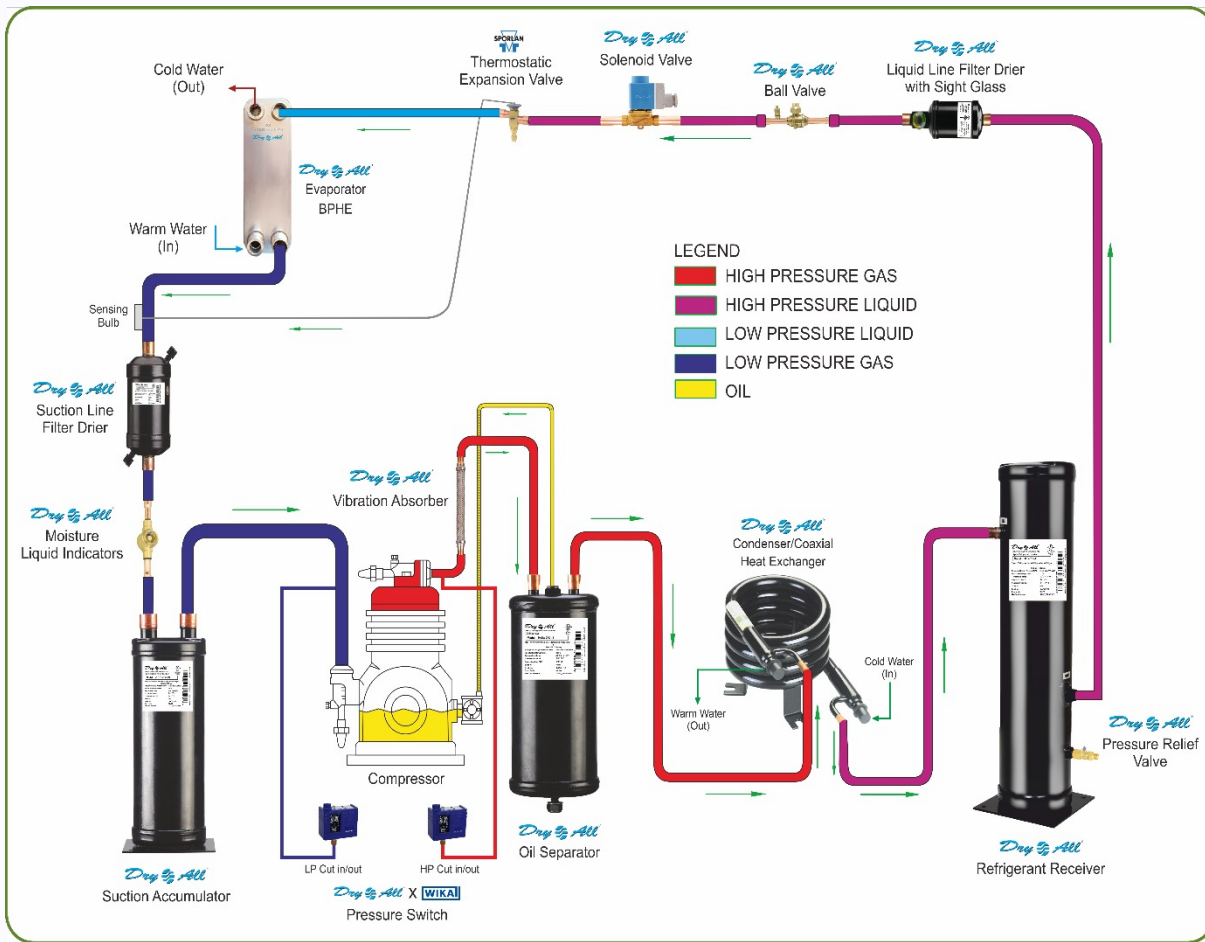
# Enhancing Efficiency through Line Products of Heat Pumps: The Essential Role of Dry All



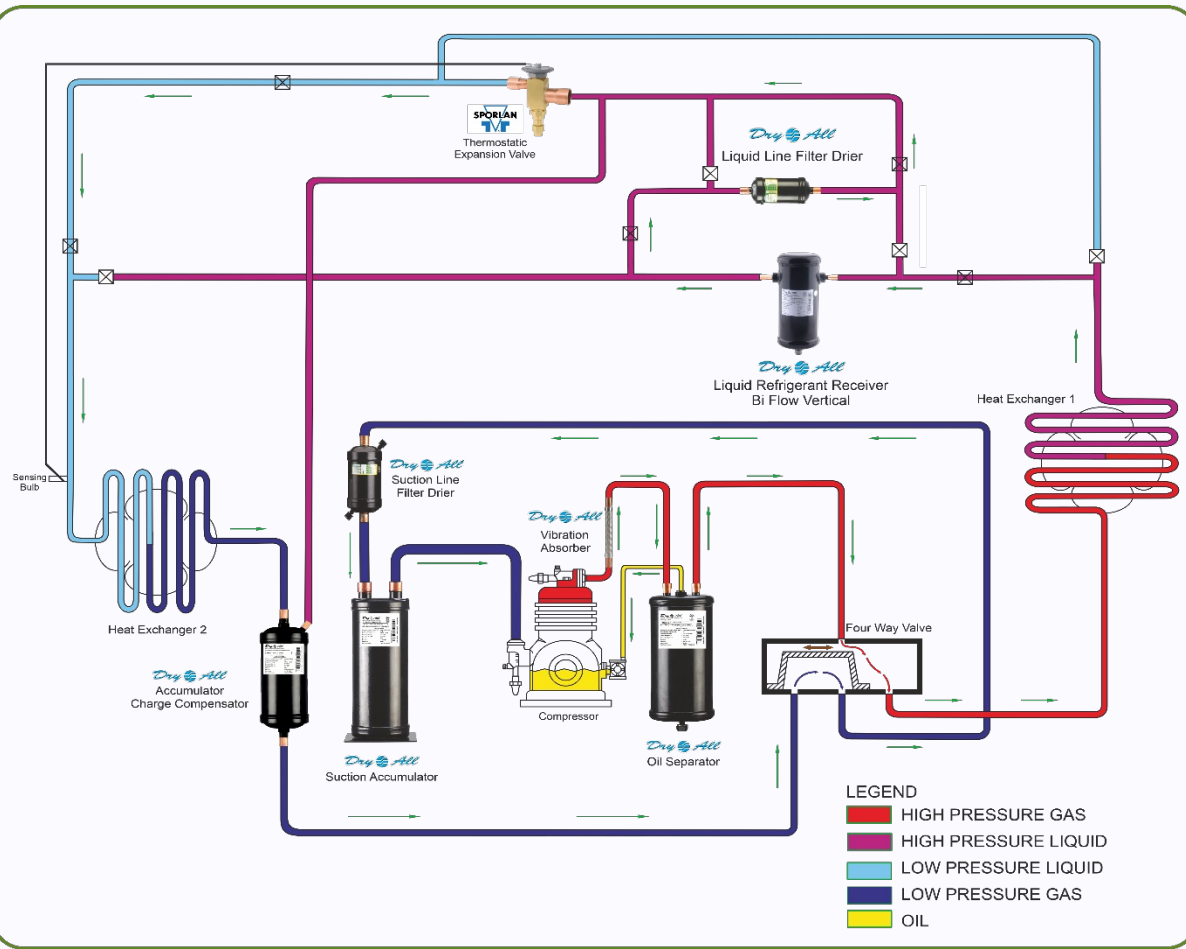
# Understanding Heat Pumps

- A sustainable alternative, is extracting heat from ambient sources and using eco-friendly refrigerants.
- In winter, the heat pump pulls heat from the outdoor air or ground (via a ground-source heat pump) and warms up indoor spaces.
- In summer, the heat pump reverses its operation. It absorbs heat from indoor air and releases it outdoors, effectively cooling the space.
- Because of their versatility, heat pumps need specially designed Line Products to manage refrigerant flow and moisture.





## Fundamentals of a Refrigeration Cycle



## Fundamentals of a Heat Pump Refrigeration Cycle

# One Stop Solution: Dry All

Dry All addresses these challenges with a range of products designed for optimal heat pump performance



Bi-flow Filter Driers



Accumulators



Bi-flow Receivers



Oil Separators



Accumulator Charge Compensators



# Filter Driers (Uni-flow & Bi-flow)

- Filters Contaminations
- Adsorbs moisture & acids
- Bi-flow Filter Driers are engineered to accommodate bidirectional refrigerant flow



# Suction Line Accumulators

- Catch and hold any unused portion of the system charge.
- Stop liquid refrigerant down the suction line by converting all refrigerant to vapor.
- Catch oil which has escaped from compressor and by passed the Oil Separator
- Hold the oil and return the same back to compressor.
- Also available with Heat Exchangers and in Stainless Steel for Mobile Cooling Solutions.





# Liquid Refrigerant Receivers (Uni-flow & Bi-flow)

- Designed to hold excess liquid that would otherwise back up in the condenser coil.
- Act as a storage vessel for liquid refrigerant either for system pump downs or as a safeguard to ensure that a solid column of liquid is always available in the liquid line.
- Bi-flow Receivers can work in a reverse cycle unit



# Oil Separators

- Oil Separators efficiently extract oil from discharged refrigerants, thus optimizing oil return to the compressor.
- These Oil Separators eliminate the formation of an insulating film on internal surfaces, which can hinder system performance



# Accumulator Charge Compensators

- Efficiently manage refrigerant while transitioning between cooling and heating modes of a heat pump
- Facilitates better system control, enhances efficiency, and ensures seamless operation during mode transitions.



# Why Dry All?

Dry All presents itself as 3-decade old organization manufacturing "Full Range of HVAC&R Line Components."

- Customizations available
- Certifications, Compliances & Accreditations
- In-house Testing Facility
- Superior Quality & Short Lead time
- Compatible with Low-GWP (Global Warming Potential) Refrigerants



# Other Components Used in Heat Pumps.

## Valves & Accessories



Filter Driers for Small Appliances



DRC-48 DRC-100

Replaceable Core Shells



Drier Cores & Filters



Receiver Driers



Pressure Relief Valves



Moisture Liquid Indicators



Vibration Absorbers



Ball Valve



Rotolock Valves



Snub Adaptors

## Power Controls



Crankcase Heaters



Solenoid Valves

WIKAI



Pressure Switches



Cartridge Pressure Switches



ROUND DOUBLE HELIX

Coaxial Heat Exchangers



3-in-1 Aluminium Heat Exchangers



Coil-in-Shell Heat Exchangers



Swimming Pool Heat Exchangers



Economisers



For HVAC&R Applications

Braze Plate Heat Exchangers



For Mobile Applications

Braze Plate Heat Exchangers

ONDA



Shell & Tube Heat Exchangers

## Heat Exchangers



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**Thank You**

